

Table 1: Comparison Proposed Action and the Mitigation Alternative Impacts

Action	Impact ¹	Impact of Proposed Action
Land Use, Visuals, Recreation		
Generation plant and pipeline construction	Increase in traffic volume, vehicle noise and dust in the study areas	A
Generation plant operation wastewater disposal	Potential loss of value to state land used as a LAD	A
Generation plant operation wastewater disposal	Potential increase in revenue from a state land lease	B
Generation plant construction and operation	Potential increase in property values for existing homes outside the affected area	B
Generation plant construction and operation	Potential decrease in property values for existing homes nearby the proposed generation plant site	A
Generation plant construction and operation	Realization of Butte-Silver Bow's land use plans for the Generation Plant site.	B
Generation plant construction and operation	Change in landscape by the construction and operation of the generation plant and associated transmission structures	A
Generation plant operation	Generation plant vapor plume visibility to residences, travelers on Interstate Highways 15 and 90, and recreationists using the Continental Divide National Scenic Trail	A
Generation plant operation	Intensity and flashing operation of strobe lights on the exhaust stacks would impact nearby residences	A
Pipeline construction and operation	Potential conflict with ARCO Warm Springs Pond Management Plan	A
Pipeline construction	Adverse changes to landscape through vegetation removal, earthwork and grading, staging and laydown areas from highway and road viewpoints	A
Pipeline construction	Short-term disruption and displacement of dispersed recreation activities	A
Pipeline construction	Disruption and displacement of dispersed fishing use for approximately 1 to 2 weeks due to trenching of rivers and streams	A
Pipeline construction	Impairment of recreational fishery on the Dearborn and Missouri Rivers	S
	Mitigation: Section 2.2.2.2 Trenchless crossing of the Dearborn River mitigation	
Soil Resources		A
Generation Plant –Construction	Increased soil erosion and offsite sedimentation	A
	Soil compaction and rutting	A
	Decreased reclamation potential	A
Generation Plant –LAD Operation	Increased soil erosion and offsite sedimentation	A
	Soil compaction and rutting	A
	Decreased reclamation potential	A
Pipeline – Construction	Increased soil erosion and offsite sedimentation	A
	Soil compaction and rutting	A
	Decreased reclamation potential	S

Action	Impact ¹	Impact Severity ²	
		Proposed Action	Mitigation Alternative
	Mitigation: Section 2.2.2.3: Top soil salvage, Multiple horizon soil salvage, Soil compaction Minimization, 100-year floodplain; Contractor compliance monitoring.		
Pipeline – Operation (maintenance spills)	Contaminated soils and inhibited plant growth	A	N
Water Resources			
Process water diversion for generation plant operations	Reduction of instream flow in Warm Springs Creek	S	N
	Mitigation: Section 2.2.2.1 Maintenance of adequate instream flows in Warm Springs Creek		
Process wastewater discharge		A	A
Generation Plant Operations	Silver Bow Creek water quality impairment		
Process wastewater discharge for Generation Plant Operations	Sheep Gulch surface water quality impairment	A	A
Process wastewater discharge for Generation Plant Operations	Sheep Gulch groundwater quality impairment	A	A
Stream crossings timing and duration	Change in beneficial use	A	A
Gas Pipeline Construction			
Gas Pipeline Construction	Erosion and stream sedimentation levels	A	N
Hydrostatic water testing	Alteration to stream flow	A	A
Gas Pipeline Construction			
Release of hydrostatic testing water	Alteration of instream sedimentation	A	N
Pipeline Construction			
	Groundwater flow or quality impairment	A	A
	Stream crossing surface water quality impairment	A	N
	Pipeline exposure from migrating stream channel	A	N
Wetland Resources			
Generation Plant –LAD Operation	Alterations to wetland hydrology, soils, or vegetation	B	B
Generation Plant –LAD Operation	Alterations to wetland functions and values	B	B
Pipeline Construction	Alterations to wetland hydrology, soils, vegetation	A	A
	Alterations to wetland functions and values	A	A
Pipeline Operation	Alterations to wetland hydrology, soils, vegetation	A	A
	Alterations to wetland functions and values	A	A
Vegetation Resources			
Generation Plant construction and operation	Long-term loss of vegetation cover and production on approximately 21.8 acres at the generation plant,	A	A

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	approximately 100-200 acres at the upland sprinkler system wastewater disposal site, and approximately 100 acres impacted by salt deposition from cooling stacks.		
Generation plant construction and operation	New noxious weed infestations	A	A
	Enlarged noxious weed infestations	A	A
Pipeline construction	Long-term loss of vegetation cover and production on approximately 953 acres over 4 pipeline segments.	S	A
	Mitigation: Measures described under Section 2.2.2.3.		
Pipeline construction	Special-status plant population loss	A	A
Pipeline construction	Degrade shrub, forested, or high-condition/unique wetland/riparian areas	A	A
Pipeline construction	New noxious weed infestations	A	A
Pipeline construction	Enlarged noxious weed infestations	A	A
Wildlife Resources			
Generation Plant construction and operation	Direct mortality of special-status species (Preble's Shrew)	A	A
Generation Plant construction and operation	Long-term (greater than three years) loss of wildlife habitat.	A	A
Generation Plant construction and operation	Temporary (construction) and short-term (less than three-years) loss of wildlife habitat or disruption of wildlife behavior that may result in increased mortality or lowered reproductive success	A	A
Pipeline construction	Direct mortality of special-status species	A	A
Pipeline construction	Long-term (greater than three-years) inability of wildlife to use biologically important habitat.	A	A
Pipeline construction	Long-term (greater than three years) loss of wildlife habitat.	A	A
Pipeline construction	Short-term (less than three-years) loss of wildlife habitat that may result in increased mortality or lowered reproductive success.	A	A

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Pipeline construction	Temporary (construction) loss of wildlife habitat or disruption of wildlife behavior that may result in increased mortality or lowered reproductive success. Mitigation: Section 2.2.2.5 consult with FWP to develop timing restrictions to avoid constructing in big game winter range during critical periods.	S	A
Fish Resources			
Generation plant construction and operation	Chronic (likely to occur on an annual basis) inability of fish to use biologically important habitat (e.g. spawning or migrating).	A	B
Generation plant construction and operation	Chronic (likely to occur on an annual basis) loss of existing fish habitat that may result in increased mortality or lowered reproductive success.	A	B
Generation plant construction and operation	Occasional (occurring sporadically within a year or among years) loss of fish habitat that may result in increased mortality or lowered reproductive success. Mitigation: Section 2.2.2.1 Maintenance of adequate instream flows in Warm Springs Creek	S	B
Pipeline construction (Silver Creek)	Direct mortality of special-status species or of substantial numbers of fish in Silver Creek. Mitigation: Section 2.2.2.2 trenchless crossing of Silver Creek Mitigation: Section 2.2.2.2 appropriate disposal of contaminated fill excavated at Silver Creek crossing	S	A
Pipeline construction (Dearborn River and Sun River)	Short term (less than two years) loss of fish habitat that may result in increased mortality or lowered reproductive success Mitigation: Section 2.2.2.2 Trenchless crossing (Dearborn River); Dry or trenchless crossing (Sun River) Mitigation: Section 2.2.2.2 Modify crossing timing windows to those specified by FWP.	S	N
Pipeline construction (backwater Sun River, Spring Creek, backwater Teton River, Jones Creek, Muddy Creek, Big Coulee Creek, Flat Creek)	Short term (less than two years) loss of fish habitat that may result in increased mortality or lowered reproductive success	A	N
Pipeline construction inflowing streams that support rainbow trout	Risk of introducing Whirling Disease	S	A

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	Mitigation: Section 2.2.2.2 Whirling disease mitigation Mitigation: Section 2.2.2.2 Trenchless Dearborn River crossing		
Air			
Generation plant construction	Fugitive emissions – Emissions of PM and PM ₁₀ from vehicle traffic	A	A
Generation Plant operation	Point Sources - Emissions of NO _x , PM ₁₀ , VOCs, SO ₂ , and NH ₄ from turbine stacks and cooling towers	A	A
	Deposition of NH ₄ , nutrients and nitrogen derived compounds	A	A
	Salt deposition	A	A
	Smog and Greenhouse Gas Emissions	A	A
	Morel Tap	Fugitive emissions – Emissions of PM and PM ₁₀ from vehicle traffic and construction of the facility	A
Silver City Loop & Mainline #4 Compressor Station	Fugitive emissions – Emissions of PM and PM ₁₀ from vehicle traffic and construction of the facility	A	A
Wolf Creek Loop and Mainline #3 Compressor Station	Point Sources - Emissions from the firing of natural gas at the compressor stations of NO _x , PM ₁₀ , VOCs, and SO ₂	A	A
Mainline #1 Compressor Station	Greenhouse gas emissions	A	A
Noise			
Generation Plant-Construction	Temporary annoyance, speech interference, and stress due to increased noise levels at residences.	A	A
Generation Plant-Operation	Annoyance due to increased noise levels at residences.	A	A
Generation Plant-High-pressure steam vent during plant start-up	Temporary annoyance, speech interference and stress due to increase in noise levels at residences.	A	A
Transmission Line-Construction	Temporary annoyance, speech interference, and stress due to increased noise levels at residences.	A	A
Gas Pipeline-Construction	Temporary annoyance, speech interference, and stress due to increased noise levels at residences.	A	A
Gas Pipeline-Operation of compressor stations	Annoyance due to increased noise levels at residences.	A	A

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Cultural Resources			
Generation Plant construction	Cutting a portion of historic ditch	A	A
Generation Plant construction	Potential disturbance of prehistoric bison kill	A	A
Generation Plant construction	Transient visual impacts to NRHP-listed sites	A	A
Pipeline construction	Potential disturbance of four prehistoric archeological sites	A	A
Pipeline construction and operation	Visual impacts to two historic districts and two historic sites	A	A
Socioeconomic Resources			
Generation Plant construction and operation and Pipeline construction and operation	Local employee incomes	B	B
Generation Plant construction	Short term construction job opportunities	B	B
Generation Plant operation	Long term jobs	B	B
Generation Plant and pipeline construction and operation	Local business sales	B	B
Generation Plant and pipeline construction and operation	Government revenue	B	B
Generation Plant construction and operation	Infrastructure demands	A	A
Generation Plant construction	Housing availability	A	A
Generation Plant construction and operation	Property values	B	B
Generation Plant operation	Electric utilities	A	B
Generation Plant and Pipeline operation	MPC gas system	B	B
Pipeline Construction	Trenched crossing of the Dearborn River may impair fishery on the Dearborn and Missouri Rivers	S	A
	Mitigation: Section 2.2.2.2 Whirling disease mitigation		
	Mitigation: Section 2.2.2.2 Trenchless Dearborn River crossing		
Infrastructure			
Pipeline construction	Impediment to the through mobility of a roadway	A	A
	Reliability of natural gas pipeline	B	B
Pipeline failure	Especially for pipeline failures affecting I-90 (authorized for semi triple trailers): roadway closures; damage to rights of way; contamination of right-of-way	S	A

Action	Impact ¹	Impact Severity ²	
		Proposed Action	Mitigation Alternative
	material; detour of traffic and corresponding damage to detour roadway; loss of goods and services to public		
	Mitigation: Develop an Emergency Response Plan		
Pipeline closure and reclamation	Impediment to the through mobility of a roadway	A	A
Generation Plant construction	Roadway wear	A	A
Generation plant and pipeline construction and operation	Increased risk of explosive hazard and toxic materials release	A	A
Pipeline construction	Risk to workers from bee farms	A	N
Cumulative Effects			
Wastewater discharge to Sheep Gulch combined with ASiMI discharges Generation Plant operations	Water quality impairment	A	A
Combined future ASiMI needs with the proposed project	Reduction in instream flows in Warm Springs Creek impacts to fishery	S	B
	Mitigation: Section 2.2.1.2: Maintenance of instream flows in Warm Springs Creek		
MPC and CES land disturbance activities combined with past, present and future land disturbance activities in the study areas	Spread of noxious weeds due to additional land disturbance activities in the study areas	A	A
	Replacement of non-native plants due to additional land disturbance activities in the study areas	A	A
Generation plant operation combined with planned future generation plant operations	Reduced availability of transmission capacity for additional power generators in Montana	A	A
Generation plant operation combined with planned future generation plant operations	Potential reduction in electricity prices in the event of electricity transmission constraint	B	B

¹ Impact column also contains a reference to the mitigations from the Mitigation Alternative that would reduce significant impacts to less than significant. Mitigation measures referenced in this table are described in Section 2.2 under the Mitigation Alternative.

² Impact categories: Adverse but not significant (A), Significantly adverse (S), Beneficial (B), and No impact (N).

